UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:	ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT FOR REMOVAL ACTION
	Segments 6 & 7 of the Tittabawassee River, Saginaw River & Bay Site
Respondent:	
The Dow Chemical Company	Docket No. V-W-19-C-009
	Proceeding Under Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622

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I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Settlement Agreement and Order on Consent ("Settlement Agreement") is entered into voluntarily by the United States Environmental Protection Agency ("U.S. EPA") and The Dow Chemical Company ("Dow" or "Respondent"). This Settlement Agreement provides for Dow's performance of a non-time critical removal action selected by U.S. EPA, and the payment of certain response costs incurred by the United States at or in connection with addressing sediment and riverbank soil contaminated with dioxins and furans within Segments 6 & 7 of the Tittabawassee River, Saginaw River & Bay site ("TRSR&B Site"), Michigan, as defined in the Administrative Order on Consent ("2010 AOC") entered in In The Matter of: The Dow Chemical Company, CERCLA Docket No. V-W-10-C-942, with an effective date of January 21, 2010.

2. This Settlement Agreement is issued under the authority vested in the President of the United States by Sections 104, 106(a), 107 and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622, as amended ("CERCLA"). This authority has been delegated to the Administrator of the U.S. EPA by Executive Order No. 12580, January 23, 1987, 52 Federal Register 2923 (Jan. 29, 1987), and further delegated to the Regional Administrators by U.S. EPA Delegation Nos. 14-14-A (Determinations of Imminent and Substantial Endangerment, Nov. 1, 2001), 14-14-C (Administrative Actions Through Consent Orders, Apr. 15, 1994) and 14-14-D (Cost Recovery Non-Judicial Agreements and Administrative Consent Orders, May 11, 1994), and further redelegated by the Regional Administrator of U.S. EPA Region 5 to the Director, Superfund & Emergency Management Division, Region 5, by Regional Delegation Nos. 14-14-A, 14-14-C and 14-14-D.

3. U.S. EPA has notified the State of Michigan (the "State") of this action pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

4. U.S. EPA and Respondent recognize that this Settlement Agreement has been negotiated in good faith and that the actions undertaken by Respondent in accordance with this Settlement Agreement do not constitute an admission of any liability. Respondent does not admit, and retains the right to controvert in any proceedings other than proceedings to implement or enforce this Settlement Agreement, the basis of or validity of the findings of facts, conclusions of law, and determinations in Sections IV (Findings of Fact) and V (Conclusions of Law and Determinations) of this Settlement Agreement. Respondent agrees to comply with and be bound by the terms of this Settlement Agreement and further agrees that it will not contest the basis or validity of this Settlement Agreement or its terms in any proceeding to implement or enforce this Settlement Agreement.

II. PARTIES BOUND

5. This Settlement Agreement applies to and is binding upon U.S. EPA and upon Respondent and its successors and assigns. Any change in ownership or corporate status of Respondent including, but not limited to, any transfer of assets or real or personal property shall not alter Respondent's responsibilities under this Settlement Agreement.

6. Respondent is required to carry out all activities required by this Settlement Agreement.

7. Respondent shall ensure that its contractors, subcontractors, and representatives comply with this Settlement Agreement. Respondent shall be responsible for any noncompliance with this Settlement Agreement.

III. DEFINITIONS

8. Unless otherwise expressly provided herein, terms used in this Settlement Agreement which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Settlement Agreement or in the appendices attached hereto and incorporated hereunder, the following definitions shall apply:

   a. "2010 AOC" shall mean the Administrative Order on Consent entered in In The Matter of: The Dow Chemical Company, CERCLA Docket No. V-W-10-C-942, with an effective date of January 21, 2010.

   b. "2010 SOW" shall mean the Statement of Work attached as Appendix A to the 2010 AOC.

   c. "Action Memorandum" shall mean the U.S. EPA Action Memorandum relating to the Site, and all attachments thereto. The Action Memorandum is attached as Attachment A.

   d. "Affected Property" shall mean all real property at the Site and any other real property where U.S. EPA determines, at any time, that access or land, water, or other resource use restrictions are needed to implement the removal action.

   e. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601, *et seq*.

   f. "Dioxin" or "dioxins" or "furan" or "furans" shall mean the seventeen chlorinated dibenzo-p-dioxins and chlorinated dibenzofurans identified by the World Health Organization in *The 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds*, and as set forth below:

Congener (Full-Name)	Congener (Abbreviation)	CAS No
Dioxins		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	2,3,7,8-TCDD	1746-01-6
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1,2,3,7,8-PCDD	40321-76-4
1,2,3,4,7,8- Hexachlorodibenzo-p-dioxin	1,4-HxCDD	39227-28-6
1,2,3,6,7,8- Hexachlorodibenzo-p-dioxin	1,6-HxCDD	57653-85-7
1,2,3,7,8,9- Hexachlorodibenzo-p-dioxin	1,9-HxCDD	19408-74-3
1,2,3,4,6,7,8- Heptachlorodibenzo-p-dioxin	1,4,8-HpCDD	35822-39-4
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	OCDD	3268-87-9
Furans		
2,3,7,8-Tetrachlorodibenzofuran	2,3,7,8-TCDF	51207-31-9
1,2,3,7,8-Pentachlorodibenzofuran	1,2,3,7,8-PCDF	57117-41-6
2,3,4,7,8-Pentachlorodibenzofuran	2,3,4,7,8-PCDF	57117-31-4
1,2,3,4,7,8-Hexachlorodibenzofuran	1,4-HxCDF	70648-26-9
1,2,3,6,7,8- Hexachlorodibenzofuran	1,6-HxCDF	57117-44-9
1,2,3,7,8,9- Hexachlorodibenzofuran	1,9-HxCDF	72918-21-9
2,3,4,6,7,8- Hexachlorodibenzofuran	4,6-HxCDF	60851-34-5
1,2,3,4,6,7,8- Heptachlorodibenzofuran	1,4,6-HpCDF	67562-39-4
1,2,3,4,7,8,9- Heptachlorodibenzofuran	1,4,9-HpCDF	55673-89-7
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	OCDF	39001-02-0

Individual dioxins and furans are assessed using a toxic equivalency factor ("TEF"), which is an estimate of the relative toxicity of the compounds to 2,3,7,8-tetrachlorodibenzo-p-dioxin. These converted concentrations are then added together to determine the "toxic equivalence concentration" ("TEQ") of the dioxin and furan compounds as a whole.

g. "Effective Date" shall be the effective date of this Settlement Agreement as provided in Paragraph 94.

h. "Engineering Evaluation and Cost Analysis" or "EE/CA" shall mean the *Tittabawassee River Segments 6 and 7 (OU 1) Response Proposal*, dated April 13, 2018, and approved by U.S. EPA on September 28, 2018.

i. "Future Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the United States incurs in reviewing or developing deliverables submitted pursuant to this Settlement Agreement, in overseeing implementation of the Work, or otherwise implementing, overseeing, or enforcing this Settlement Agreement, including but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, the costs incurred pursuant to Section IX (Property Requirements) (including, but not limited to, cost of attorney time and any

monies paid to secure or enforce access or land, water, or other resource use restrictions, including, but not limited to, the amount of just compensation), Section XIII (Emergency Response and Notification of Releases), community involvement, Section XVI (Dispute Resolution), and all litigation costs. Future Response Costs shall also include Agency for Toxic Substances and Disease Registry (ATSDR) costs regarding the Site.

j. "Interest" shall mean interest at the rate specified for interest on investments of the U.S. EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year. Rates are available online at http://www2.epa.gov/superfund/superfund-interest-rates.

k. "National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

l. "Paragraph" shall mean a portion of this Settlement Agreement identified by an Arabic numeral or an upper or lower case letter.

m. "Parties" shall mean U.S. EPA and Respondent.

n. "Post-Removal Site Control" shall mean actions necessary to ensure the effectiveness and integrity of the removal action to be performed pursuant to this Settlement Agreement consistent with Sections 300.415(*l*) and 300.5 of the NCP and "Policy on Management of Post-Removal Site Control" (OSWER Directive No. 9360.2-02, Dec. 3, 1990).

o. "RCRA" shall mean the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901, *et seq.* (also known as the Resource Conservation and Recovery Act).

p. "Respondent" shall mean The Dow Chemical Company.

q. "Section" shall mean a portion of this Settlement Agreement identified by a Roman numeral.

r. "Settlement Agreement" shall mean this Administrative Settlement Agreement and Order on Consent and all appendices attached hereto (listed in Section XXIX). In the event of conflict between this Settlement Agreement and any appendix, this Settlement Agreement shall control.

s. "Site," for the purposes of this Settlement Agreement, shall mean the in-channel and banks portions of Segments 6 & 7 of the TRSR&B Site, and nearby areas required to do the Work. Segment 6 begins approximately 17.7 miles downstream of the confluence of the Tittabawassee River with the Chippewa River at the upstream end of Reach NN, and extends approximately 3 miles through the Reach SS. Segment 7 begins approximately 20.7 miles downstream of the confluence of the Tittabawassee River with the Chippewa River at the upstream end of Reach TT and extends approximately 3.7 miles through the downstream end of Reach YY. The Action Memorandum for the Site is attached as Attachment A to this Settlement Agreement. Segments 6 & 7 are depicted in Attachment B. The TRSR&B Site is defined in the 2010 AOC.

The EE/CA and the Action Memorandum identified specific in-channel sediment deposits (Sediment Management Areas or "SMAs") and riverbank stretches (Bank Management Areas or "BMAs") in Segments 6 & 7 that will require removal response actions. The SMAs and BMAs within Segments 6 & 7 where removal response actions are required as of the effective date of this Settlement Agreement are depicted on the Figures and in the Table in Attachment C. The Parties acknowledge that additional SMAs and/or BMAs in Segments 6 & 7 may be identified and may be added to the Site through amendment of the Action Memorandum by U.S. EPA and amendment of this Settlement Agreement by the Parties. Any such SMAs and/or BMAs that are added to the Site through amendment of the Action Memorandum and the Settlement Agreement shall be addressed through the removal response actions selected in the Action Memorandum and shall be addressed by Respondent under the terms of this Settlement Agreement as amended.

t. "State" shall mean the State of Michigan.

u. "TRSR&B Site Special Account" shall mean the special account within the U.S. EPA Hazardous Substance Superfund, established for the TRSR&B Site by U.S. EPA pursuant to Section 122(b)(3) of CERCLA, 42 U.S.C. § 9622(b)(3).

v. "Transfer" shall mean to sell, assign, convey, lease, mortgage, or grant a security interest in, or where used as a noun, a sale, assignment, conveyance, or other disposition of any interest by operation of law or otherwise.

w. "United States" shall mean the United States of America and each department, agency, and instrumentality of the United States, including U.S. EPA.

x. "U.S. EPA" shall mean the United States Environmental Protection Agency and its successor departments, agencies, or instrumentalities.

y. "Waste Material" shall mean (1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section

101(33) of CERCLA, 42 U.S.C. § 9601(33); (3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); (4) any "contaminant" as defined by Section 11102 of NREPA, Mich. Comp. Laws § 324.11102(1) ; and (5) any "hazardous substance" as defined by Section 20101 of NREPA, Mich. Comp. Laws § 324.20101(1)(x).

z. "Work" shall mean all activities and obligations Respondent is required to perform under this Settlement Agreement except those required by Section XI (Record Retention).

IV. FINDINGS OF FACT

9. Based on available information, including the Administrative Record in this matter, U.S. EPA hereby finds that:

a. The Site encompasses the area described in Paragraph 8.s. of this Settlement Agreement. The Site is the location where Respondent has disposed of hazardous substances, pollutants, or contaminants, or where such materials have or may have come to be located.

b. The Dow Chemical Company is a Delaware corporation and its registered agent is The Corporation Trust Company with an address of Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware.

c. The Midland Plant began operations in 1897. The Midland Plant covers approximately 1,900 acres. The majority of the Midland Plant is located on the east side of the Tittabawassee River and south of the City of Midland.

d. The Tittabawassee River is a tributary to the Saginaw River, draining 2,600 square miles of land in the Saginaw River watershed. The Tittabawassee River flows south and east for a distance of approximately 80 miles to its confluence with the Shiawassee River approximately 22 miles southeast of Midland. Upstream of the Midland Plant, the Tittabawassee River flow is regulated by the Secord, Smallwood, Edenville, and Sanford dams. The current operation of the hydroelectric station at Sanford results in water releases from Sanford Dam during peak electricity usage periods to provide peaking power to Consumer's Energy. Sanford Lake has limited flood storage capacity due to a narrow range of permitted lake levels. The Dow Dam is located adjacent to the Midland Plant. Below the Dow Dam, the river flow is free-flowing to its confluence with the Shiawassee and Saginaw Rivers and into Saginaw Bay. Tittabawassee River flow and water level fluctuate daily in response to releases from the Sanford Dam. The average and 100-year flood discharge for the Tittabawassee River based on data from 1937 to 1984 are approximately 1,700 cubic feet per second ("cfs") and 45,000 cfs, respectively. The relatively large ratio between the 100-year flood discharge and the long-term average discharge (26.5)

indicates that the river is "flashy," or has a flow regime that is characterized by highly variable flows with a rapid rate of change.

e. The average monthly discharge from 1937 to 2003 for the Tittabawassee River 2,000 feet downstream of the Dow Dam ranged from approximately 600 cfs (in August) to 3,900 cfs (in March), with an average of 1,700 cfs. Discharge is typically highest in March and April during spring snowmelt and runoff. The maximum recorded historical crest of the Tittabawassee River occurred in 1986. A large storm in September 1986 produced up to 14 inches of rain in 12 hours. The discharge of the river near the Dow Dam reached nearly 40,000 cfs, and the river stage was 10 feet above flood stage at its crest. Flows greater than 20,000 cfs have occurred in 27 events over the 107 years between 1910 and 2017, with flows greater than 30,000 cfs occurring in 1912, 1916, 1946, 1948, 1986, and most recently in June 2017, when the river discharge reached 39,100 cfs. In March 2004 and April 2011, 2013, and 2014, the river discharge reached or exceeded 24,000 cfs, which corresponds to an approximate 10-year return period. Water levels and flows in Segment 7 of the Tittabawassee River, near the confluence of the Shiawassee River and Saginaw River, are also strongly influenced by the seiche conditions in Saginaw Bay, and fluctuations in the water levels of the Great Lakes.

f. Portions of the Tittabawassee River floodplain are periodically inundated by floodwaters.

g. The Saginaw River flows through Saginaw, Michigan and from there to Bay City, where the river discharges into Saginaw Bay in Lake Huron.

h. Over the time of its operation, the Midland Plant has produced over 1,000 different organic and inorganic chemicals. These chemicals include the manufacture of 24 chlorophenolic compounds since the 1930s.

i. Earlier in the history of the Midland Plant, wastes were discharged directly into the Tittabawassee River and, sometime later, wastes were stored and partially treated in settling ponds prior to discharge to the River. Other wastes were disposed of at the Midland Plant either on land or by burning. Flooding of the Midland Plant property may have resulted in discharges to the Tittabawassee River of stored brines and untreated or partially treated process wastewaters. Over time, changes in waste management practices included installation and operation of a modern wastewater treatment plant as well as use of incinerators instead of open burning. Changes in the wastewater treatment plant and subsequent incorporation of pollution controls into both the operations of and emissions from the incinerators have reduced or eliminated non-permitted releases and emissions from the Midland Plant.

j. Pursuant to Section 3006 of RCRA, 42 U.S.C. § 6926, the Administrator of U.S. EPA may authorize a State to administer the RCRA hazardous waste program in lieu of the federal program when the Administrator finds that the State program meets

certain conditions. Any violation of regulations promulgated pursuant to Subtitle C (Sections 3001-3023 of RCRA, 42 U.S.C. §§ 6921-6939e) or of any state provision authorized pursuant to Section 3006 of RCRA, 42 U.S.C. § 6926, constitutes a violation of RCRA, subject to the assessment of civil penalties and issuance of compliance orders as provided in Section 3008 of RCRA, 42 U.S.C. § 6928. Pursuant to Section 3006(b) of RCRA, 42 U.S.C. § 6926(b), the Administrator of U.S. EPA granted the State of Michigan final authorization to administer a state hazardous waste program in lieu of the federal government's base RCRA program effective October 30, 1986. 51 Fed. Reg. 36,804 (Oct. 16, 1986). The U.S. EPA granted Michigan final authorization to administer certain Hazardous and Solid Waste Amendments of 1984 and additional RCRA requirements effective January 23, 1990, 54 Fed. Reg. 48,608 (Nov. 24, 1989); June 24, 1991, 56 Fed. Reg. 18,517 (Apr. 23, 1991); November 30, 1993, 58 Fed. Reg. 51,244 (Oct. 1, 1993); April 8, 1996, 61 Fed. Reg. 4,742 (Feb. 8, 1996); December 28, 1998, 63 Fed. Reg. 57,912 (Oct. 29, 1998) (stayed and corrected effective June 1, 1999, 64 Fed. Reg. 10,111 (Mar. 2, 1999)); July 31, 2002, 67 Fed. Reg. 49,617 (Jul. 31, 2002); March 9, 2006, 71 Fed. Reg. 12141 (March 9, 2006); January 7, 2008, 73 Fed. Reg. 1077 (January 7, 2008); March 2, 2010, 75 Fed. Reg. 9345 (March 2, 2010); and August 28, 2015 80 Fed. Reg. 52194 (August 28, 2015). U.S. EPA authorized Michigan regulations are codified at Michigan Part 111 Administrative Rules, Mich. Admin. Code rr. 299.9101-299.11109. See also 40 C.F.R. §§ 272.1150-272.1151.

k. The Michigan Department of Environmental Quality ("MDEQ"; renamed the Michigan Department of Environment, Great Lakes, and Energy as of April 2019) reissued to Dow its current RCRA Hazardous Waste Management Facility Operating License for the Midland Plant, with an effective date of September 25, 2015 (the "License"). Under its License, and the previous licenses, Dow has been conducting corrective action work.

l. Multiple rounds of sampling have been conducted at the TRSR&B Site under the License, and otherwise, including extensive sampling for dioxins and furans, which has identified TEQ levels ranging from non-detect to over 100,000 parts per trillion ("ppt"). More than 200 other secondary constituents of interest ("SCOIs") have been sampled for in a subset of samples, and some have also been detected at the TRSR&B Site. A specific list of the SCOIs is contained in Attachment G to Volume 1 of Dow's December 1, 2006, "Remedial Investigation Work Plan (RIWP): Tittabawassee River and Upper Saginaw River and Floodplain Soils – Midland, Michigan," which is part of the Administrative record.

m. Contamination of some areas of the Tittabawassee River sediment and riverbank soil adjacent to and downstream of the Midland Plant has been documented.

n. U.S. EPA's and MDEQ's understanding of potential hazardous substances in soil and sediment at the TRSR&B Site is based on various sampling, analysis, and studies regarding dioxin/furans and other contaminants, in the Tittabawassee River,

the Saginaw River, and the Saginaw Bay. Under work previously conducted under the RCRA License, primary source control has been completed and several thousand in-channel sediment and bank soil samples have been analyzed from the Site. Supplemental focused sampling and analysis has been performed under the 2010 SOW to augment the Segments 6 & 7 Site characterization. The sampling, analysis, studies, and orders relied on by U.S. EPA and MDEQ include, but are not limited to, the sampling, analysis, studies, and orders listed in Attachment A to this Settlement Agreement. In particular, the EE/CA summarizes Site conditions. Certain areas within the Site, designated as SMAs and BMAs are generally where Work under this Settlement Agreement will occur; however, additional Segments 6 & 7 SMAs and/or BMAs may be identified pursuant to Paragraph 8.s. Dioxins (primarily furans) are the contaminants of concern in Segments 6 & 7 addressed by this AOC. There are multiple sample cores in and adjacent to each SMA and BMA. In BMA 6-1 the core with the highest levels of dioxin had a length weighted average ("LWA") exceeding 10,000 ppt TEQ. The cores with the highest levels of dioxin in the other BMAs generally had LWAs between 5,000 to 10,000 ppt TEQ. In both SMA 6-1 and 7-2 there are cores with LWA dioxin levels between 5,000 to 10,000 ppt TEQ. The maximum individual samples were about 15,000 ppt at SMA 6-1, 33,000 ppt at SMA 7-1, 33,200 ppt at SMA 7-2, and 22,000 ppt at SMA 7-3.

o. The TRSR&B Site starts at the Tittabawassee and Chippewa confluence, at a local landmark, the Tridge. The TRSR&B Site is being addressed in a general upstream to downstream approach: Segment 1 consists of a 3.1 mile stretch of the Tittabawassee River that transects the Dow Midland plant; Segment 2 is about 4.1 miles long; Segment 3 is about 4.2 miles long; Segment 4 is about 3.4 miles long; and is Segment 5 is about 2.7 miles long. Segment 6 begins at State Road and extends approximately 3 miles. Land use on both sides of the river consists of residential, agricultural, and undeveloped land. Segment 6 is located within the Thomas, Saginaw, and James Townships of Saginaw County. Segment 7 begins at the railroad bridge on the upstream side of West Michigan Park and extends approximately 3.7 miles to the downstream end of Green Point Island at the confluence of the Saginaw and Tittabawassee Rivers. Segment 7 is characterized by a more natural river setting. Land use in Segment 7 consists of the Shiawassee National Wildlife Refuge ("Refuge"), agricultural, low-density residential, and undeveloped areas. In addition to the Refuge and the associated Greenpoint Nature Center, public areas in Segment 7 include West Michigan Park and the Center Road boat launch on the northeast side of the river. Segment 7 is located within the Saginaw and James Townships and City of Saginaw, all part of Saginaw County.

p. Human access to the Site is available to people using the Tittabawassee River, from West Michigan Park, Center Road boat launch, the Shiawassee National Wildlife Refuge, or across privately owned riverside properties. Wildlife in the area also has access to the Site. The Site is subject to periodic flooding during high stream flow events.

q. In order to implement response actions, U.S. EPA and Dow have entered into numerous separate Administrative Settlement Agreements and Orders on Consent ("AOCs") under the authority of Sections 104, 106(a), 107, and 122 of CERCLA.

i. On July 12, 2007, U.S. EPA and Dow entered into an AOC for a CERCLA time critical removal to dredge and dispose of a sediment deposit at Reach D adjacent to Dow's Midland plant. U.S. EPA provided Dow with notification of the completion of this AOC on October 15, 2008.

ii. On July 12, 2007, U.S. EPA and Dow entered into an AOC for a CERCLA time critical removal at Reaches J/K to remove and dispose of riverbank soils, cap an upland area, and fence off a wetland area. U.S. EPA provided Dow with notification of the completion of this AOC on May 2, 2008.

iii. On July 12, 2007, U.S. EPA and Dow entered into an AOC for a CERCLA time critical removal to dredge and dispose of a sediment deposit at Reach O. U.S. EPA provided Dow with notification of the completion of this AOC on April 10, 2008.

iv. On November 15, 2007, U.S. EPA and Dow entered into an AOC for a CERCLA time critical removal to dredge and dispose of a sediment deposit near Wickes Park in the Saginaw River. U.S. EPA provided Dow with notification of the completion of this AOC on August 4, 2008.

v. On July 15, 2008, U.S. EPA and Dow entered into an AOC for a CERCLA time critical removal to remove and dispose of floodplain soil around residential properties at Riverside Boulevard and clean the inside of occupied homes. U.S. EPA provided Dow with notification of the completion of this AOC on February 1, 2010.

vi. On February 27, 2009, U.S. EPA and Dow entered into an AOC for a CERCLA time critical removal to remove and dispose of floodplain soil at West Michigan Park and conduct soil removal and/or barrier controls at adjacent residential properties. U.S. EPA provided Dow with notification of the completion of this AOC on September 11, 2012.

vii. On May 26, 2011, U.S. EPA and Dow entered into an AOC for a CERCLA non-time critical removal action to provide interim exposure controls at eligible floodplain properties. The work under this AOC is ongoing.

viii. On July 8, 2011, U.S. EPA and Dow entered into an AOC for a CERCLA non-time critical removal action to remove a small eroding island and cap adjacent sediment in Reach MM. U.S. EPA provided Dow with notification of the completion of this AOC on July 12, 2012.

ix. On November 1, 2011, U.S. EPA and Dow entered into an AOC for a CERCLA non-time critical removal action to remove and destroy dense non-aqueous phase liquids from the Tittabawassee River and install hydraulic control barriers and caps at Sediment Management Areas in Segment 1. The work under this AOC is ongoing.

x. On November 21, 2013, U.S. EPA and Dow entered into an AOC for a CERCLA non-time critical removal action to address SMAs and BMAs within Segment 2. The work under this AOC is ongoing.

xi. On January 8, 2015, U.S. EPA and Dow entered into an AOC for a CERCLA non-time critical removal action to address soil contaminated with dioxins and furans within the Tittabawassee River 8-year floodplain of the TRSR&B Site. The work under this AOC is ongoing.

xii. On February 25, 2016, U.S. EPA and Dow entered into an AOC for a CERCLA non-time critical removal action to address SMAs and BMAs within Segment 3. The work under this AOC is ongoing.

xiii. On February 8, 2017, U.S. EPA and Dow entered into an AOC for a CERCLA non-time critical removal action to address SMAs and BMAs within Segments 4 & 5. The work under this AOC is ongoing.

r. Effective January 21, 2010, U.S. EPA, MDEQ and Dow entered into the 2010 AOC, under which Dow agreed to perform remedial investigation, feasibility study, and/or engineering evaluation and cost analysis, as well as response design (with U.S. EPA and MDEQ oversight) at the TRSR&B Site. The work under the 2010 AOC is ongoing.

s. Dioxins and furans are listed as hazardous constituents in Appendix VIII to Part 261 of Title 40 of the Code of Federal Regulations, 40 C.F.R. pt. 261 app. VIII, and Part 111 of NREPA, Mich. Comp. Laws §§ 324.11101-324.11153, and as hazardous substances in Part 201 of NREPA, Mich. Comp. Laws §§ 324.20101-324.20142.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

10. Based on the Findings of Fact set forth above, and the Administrative Record supporting this removal action, U.S. EPA has determined that:

a. The TRSR&B Site, within which the Site is located, is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

b. The contamination found at the Site, as identified in the Findings of Fact above, includes a "hazardous substance" as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

c. Respondent is a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

d. Respondent is a responsible party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and is liable for performance of response action and for response costs incurred and to be incurred at the Site.

    i. Respondent is the "owner" and/or "operator" of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).

    ii. Respondent was the "owner" and/or "operator" of a facility at the time of disposal of hazardous substances at the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2).

e. The conditions described in the Findings of Fact above constitute an actual or threatened "release" of a hazardous substance from the facility into the "environment" as defined by Sections 101(22) and 101(8) of CERCLA, 42 U.S.C.§§ 9601(22) and 9601(8).

f. The conditions present at the Site may constitute a threat to public health, welfare, or the environment because of an actual or threatened release of a hazardous substance from the facility within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a) and based upon the factors set forth in Section 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan, as amended ("NCP"), 40 CFR §300.415(b)(2). These factors include, but are not limited to, the following:

    i. High levels of hazardous substances or pollutants or contaminants in sediment and soil largely at or near the surface that may migrate. This factor is present at the Site due to the existence of elevated TEQ at or near the surface of in-channel sediment deposits and in riverbank stretches with low stability. The Site is subject to periodic high energy events. This may result in the spread of contaminated sediment and soil to other downstream locations within the floodplain and river channel.

    ii. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released. This factor is present at the Site due to seasonal and often extreme weather conditions in the winter and spring (although high flow events can occur at any time of year), which enhance the threat of movement of contaminated sediment and riverbank soil. Heavy rain and storms

increase stream volume and current velocity, which can contribute to movement of contaminated sediment and riverbank soil.

iii. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants or contaminants. This factor is present at the Site due to the existence of surface sediment contaminated at levels that may contribute to bioaccumulation of TEQ in the food chain (fish tissue) and may result in the spread of contaminated sediment and soil to other downstream locations within the floodplain and river channel where exposure may occur.

g. The removal action required by this Settlement Agreement is necessary to protect the public health, welfare, or the environment and, if carried out in compliance with the terms of this Settlement Agreement, will be consistent with the NCP, as provided in Section 300.700(c)(3)(ii) of the NCP.

VI. SETTLEMENT AGREEMENT AND ORDER

11. Based upon the Findings of Fact, Conclusions of Law, and Determinations set forth above, and the Administrative Record for this Site, it is hereby Ordered and Agreed that Respondent shall comply with all provisions of this Settlement Agreement, including, but not limited to, all attachments to this Settlement Agreement and all documents incorporated by reference into this Settlement Agreement.

VII. DESIGNATION OF CONTRACTOR, PROJECT COORDINATOR, AND ON-SCENE COORDINATOR

12. Respondent shall retain one or more contractors to perform the Work and shall notify U.S. EPA of the name(s) and qualifications of such contractor(s) per the schedule in the approved Work Plan. Respondent shall also notify U.S. EPA of the name(s) and qualification(s) of any other contractor(s) or subcontractor(s) retained to perform the Work at least 5 business days prior to commencement of such Work. U.S. EPA retains the right to disapprove of any or all of the contractors and/or subcontractors retained by Respondent. If U.S. EPA disapproves of a selected contractor, Respondent shall retain a different contractor and shall notify U.S. EPA of that contractor's name and qualifications within 3 business days of U.S. EPA's disapproval. With respect to any proposed contractor, as appropriate, Respondent shall demonstrate that the proposed contractor demonstrates compliance with ASQ/ANSI E4:2014 "Quality management systems for environmental information and technology programs – Requirements with guidance for use" (American Society for Quality, February 2014), by submitting a copy of the proposed contractor's Quality Management Plan ("QMP"). The QMP should be prepared consistent with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B0-1/002, reissued May 2006), or equivalent documentation as required by

U.S. EPA. The qualifications of the persons undertaking the Work for Respondent shall be subject to U.S. EPA's review for verification that such persons meet minimum technical background and experience requirements.

13. Respondent has designated, and U.S. EPA has not disapproved, Todd Konechne as its Project Coordinator who shall be responsible for administration of all actions by Respondent required by this Settlement Agreement. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during Site work. U.S. EPA retains the right to disapprove of the designated Project Coordinator. If U.S. EPA disapproves of the designated Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify U.S. EPA of that person's name, address, telephone number, email address, and qualifications within 4 business days following U.S. EPA's disapproval. Receipt by Respondent's Project Coordinator of any notice or communication from U.S. EPA relating to this Settlement Agreement shall constitute receipt by Respondent.

14. U.S. EPA has designated Mary P. Logan of the Remedial Response Branch #2, Region 5, as its Remedial Project Manager/On-Scene Coordinator ("RPM/OSC"). U.S. EPA and Respondent shall have the right, subject to Paragraph 13, to change their respective designated RPM/OSC or Project Coordinator. U.S. EPA shall notify the Respondent, and Respondent shall notify U.S. EPA, as early as possible before such a change is made, but in no case less than 24 hours before such a change. The initial notification may be made orally but it shall be promptly followed by a written notice.

15. The RPM/OSC shall be responsible for overseeing Respondent's implementation of this Settlement Agreement. The RPM/OSC shall have the authority vested in an OSC by the NCP, including the authority to halt, conduct, or direct any Work required by this Settlement Agreement, or to direct any other removal action undertaken at the Site. Absence of the RPM/OSC from the Site shall not be cause for stoppage of work unless specifically directed by the RPM/OSC.

VIII. WORK TO BE PERFORMED

16. Respondent shall perform, at a minimum, all actions necessary to implement the Action Memorandum, approved Work Plan and all approved designs submitted pursuant to this Settlement Agreement and the approved Work Plan. The actions to be implemented generally include, but are not limited to, the following:

    a. Conduct pre-removal field investigations to delineate the final footprints and inform the design of the SMAs and BMAs.

    b. Develop temporary staging areas and access to the Site to meet project requirements. Such areas may include, but are not limited to, equipment decontamination, dewatering, mobilization and demobilization, worker access, and exclusion zones.

c. Design the following response actions. Upon approval of the design(s), implement the response actions in accordance with the approved schedule.

i. SMA 6-1 – Use a combination of technologies that include in-situ capping and Monitored Natural Recovery ("MNR").

ii. SMAs 7-1, 7-2, and 7-3 – Construct an in-situ containment cap over contaminated sediment in the SMA.

iii. BMAs 6-1 through 6-4 and 7-1 through 7-3 – Stabilize the riverbanks.

d. Appropriately manage materials generated at the Site through implementation of the Work and dispose of these materials at approved locations in accordance with the Work Plan.

e. Conduct monitoring during the construction phase of the Work.

f. Remove and restore the temporary access, mobilization and staging areas.

17. Work Plan and Implementation.

a. Within 45 calendar days after the Effective Date, Respondent shall submit to U.S. EPA for approval a draft Work Plan for performing the removal action generally described in Paragraph 16 above. The draft Work Plan shall provide a description of, and an expeditious schedule for, the actions required by this Settlement Agreement. The Work Plan shall include a comprehensive description of the project tasks, procedures to accomplish them, quality assurance/quality control systems, project documentation, and project schedule. The Work Plan shall also include a schedule for when the Work Plan will be amended if new SMAs and/or BMAs are added to the Site and a schedule for submittal of the Post-Removal Site Control Plan.

b. U.S. EPA may approve, disapprove, require revisions to, or modify the draft Work Plan in whole or in part. To the extent practicable, and only to the extent consistent with the NCP, U.S. EPA shall first provide Respondent one request for modification and an opportunity to submit the requested modification(s) before U.S. EPA modifies the draft Work Plan. If U.S. EPA requires revisions, Respondent shall submit a revised draft Work Plan within 30 calendar days of receipt of U.S. EPA's notification of the required revisions, or on another schedule approved by the RPM/OSC. Respondent shall implement the Work Plan as approved in writing by U.S. EPA, and all designs as approved in writing by U.S. EPA, in accordance with the schedule(s) approved by U.S. EPA. Once approved, or approved with modifications, the Work Plan, the schedule, and any subsequent modifications shall be incorporated into and become fully enforceable under this Settlement Agreement.

c. Upon approval or approval with modifications of the Work Plan Respondent shall commence implementation of the Work in accordance with the schedule included therein. Respondent shall not commence any Work except in conformance with the terms of this Settlement Agreement. Respondent is not restricted from seeking to secure rights of access to property in advance of U.S. EPA approval of the Work Plan.

d. Unless otherwise provided in this Settlement Agreement, any additional deliverables that require U.S. EPA approval under the Work Plan shall be reviewed and approved by U.S. EPA in accordance with this Paragraph.

18. Submission of Deliverables.

a. General Requirements for Deliverables.

i. Except as otherwise provided in this Settlement Agreement, Respondent shall direct all submissions required by this Settlement Agreement to the RPM/OSC, Mary Logan at: U.S. EPA, Mail Code SR-6J, 77 W. Jackson Blvd., Chicago, IL 60604; (312) 886-4699; logan.mary@epa.gov. Respondent shall submit all deliverables required by this Settlement Agreement or any approved work plan to U.S. EPA in accordance with the schedule set forth in such plan.

ii. Respondent shall submit all deliverables in electronic form and, upon request by U.S. EPA, in paper copy form, as well. Technical specifications for sampling and monitoring data and spatial data are addressed in Paragraph 18.b. If any deliverable includes maps, drawings, or other exhibits that are larger than 8.5 x 11 inches, Respondent shall also provide U.S. EPA with paper copies of such exhibits, unless otherwise specified by the RPM/OSC. Respondent shall submit electronic and paper copies of all plans, reports or other submissions required by this Settlement Agreement directly to the MDEQ project coordinator for the TRSR&B Site as identified in the 2010 AOC. Where paper copies are required, Respondent is encouraged to make its submissions on recycled paper (which includes significant post-consumer waste paper content where possible) and using two-sided copies.

b. Technical Specifications for Deliverables.

i. Sampling and monitoring data should be submitted in standard Regional Electronic Data Deliverable ("EDD") format. Other delivery methods may be allowed if electronic direct submission presents a significant burden or as technology changes.

ii. Spatial data to be submitted pursuant to Task 6.3 of the 2010 SOW, including spatially-referenced data and geospatial data, should be submitted: (a) in the Environmental Systems Research Institute (ESRI) File Geodatabase format; and (b) as unprojected geographic coordinates in decimal degree format using North

American Datum 1983 (NAD83) or World Geodetic System 1984 (WGS84) as the datum. If applicable, submissions should include the collection method(s). Projected coordinates may optionally be included but must be documented. Spatial data should be accompanied by metadata, and such metadata should be compliant with the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata and its U.S. EPA profile, the EPA Geospatial Metadata Technical Specification. An add-on metadata editor for ESRI software, the EPA Metadata Editor (EME), complies with these FGDC and U.S. EPA metadata requirements and is available at https://edg.epa.gov/EME/.

iii. Each file must include an attribute name for each site unit or sub-unit submitted. Consult http://www.epa.gov/geospatial/policies.html for any further available guidance on attribute identification and naming.

iv. Spatial data submitted by Respondent does not, and is not intended to, define the boundaries of the Site.

19. Health and Safety Plan. Per the approved schedule in the approved Work Plan, Respondent shall submit for U.S. EPA review and comment a plan that ensures the protection of the public health and safety during performance of on-Site work under this Settlement Agreement. Where appropriate, this plan shall incorporate elements of "OSWER Integrated Health and Safety Program Operating Practices for OSWER Field Activities," Pub. 9285.0-OlC (Nov. 2002), available on the NSCEP database at http://www.epa.gov/nscep/index.html, and "EPA's Emergency Responder Health and Safety Manual," OSWER Directive 9285.3-12 (July 2005 and updates), available at http://www.epaosc.org/_HealthSafetyManual/manual-index.htm. In addition, the plan shall comply with all currently applicable Occupational Safety and Health Administration ("OSHA") regulations found at 29 C.F.R. Part 1910. If U.S. EPA determines that it is appropriate, the plan shall also include contingency planning. Respondent shall incorporate all changes to the plan recommended by U.S. EPA and shall implement the plan during the pendency of the removal action.

20. Quality Assurance and Sampling.

a. All sampling and analyses performed pursuant to this Settlement Agreement shall conform to U.S. EPA direction, approval, and guidance regarding sampling, quality assurance/quality control ("QA/QC"), data validation, and chain of custody procedures. Respondent shall use the Quality Assurance Project Plan ("QAPP") that has been developed by Respondent and reviewed and approved by U.S. EPA pursuant to the 2010 AOC, and any updates to the QAPP. This Settlement Agreement and the 2010 AOC require that any updates to the QAPP shall use applicable U.S. EPA QA/QC guidance, and subsequent amendments to such guidelines.

b. Respondent shall ensure that all laboratories they utilize for the analysis of samples taken pursuant to this Settlement Agreement have a documented quality system and meet the quality requirements of the QAPP, and that the laboratories perform all analyses according to QAPP-approved methods. Respondent shall ensure that U.S. EPA personnel and its authorized representatives are allowed access at reasonable times to all laboratories utilized by Respondent in implementing this Settlement Agreement. In addition, Respondent shall ensure that such laboratories shall analyze all samples submitted by U.S. EPA pursuant to the QAPP for quality assurance, quality control, and technical activities that will satisfy the stated performance criteria as specified in the QAPP. U.S. EPA may consider Environmental Response Laboratory Network (ERLN) laboratories, laboratories accredited under the National Environmental Laboratory Accreditation Program (NELAP), or laboratories that meet International Standardization Organization (ISO 17025) standards or other nationally recognized programs (http://www.epa.gov/fem/accredit.htm) as meeting the quality system requirements.

c. Respondent shall ensure that all field methodologies utilized in collecting samples for subsequent analysis pursuant to this Settlement Agreement are conducted in accordance with the procedures set forth in the QAPP, or as otherwise approved by U.S. EPA.

d. Upon request, Respondent shall provide split or duplicate samples to U.S. EPA or its authorized representatives. Respondent shall notify U.S. EPA not less than 3 business days in advance of any sample collection activity, unless shorter notice is agreed to by U.S. EPA. In addition, U.S. EPA or its authorized representative shall have the right to take any additional samples that U.S. EPA deems necessary. Upon request, U.S. EPA shall provide to Respondent split or duplicate samples of any samples it takes as part of its oversight of Respondent's implementation of the Work. Notwithstanding any provision of this Settlement Agreement, U.S. EPA and the State retain all of their authorities and rights to conduct sampling at the Site, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

e. Respondent shall submit to U.S. EPA the results of all sampling and/or tests or other data obtained or generated by or on behalf of Respondent with respect to the Site and/or the implementation of this Settlement Agreement.

f. Respondent waives any objections to any data gathered, generated, or evaluated by U.S. EPA or Respondent in the performance or oversight of the Work that has been verified according to the QA/QC procedures required by the Settlement Agreement or any U.S. EPA-approved Work Plans or Sampling and Analysis Plans under this Settlement Agreement. If Respondent objects to any other data relating to the Work, Respondent shall submit to U.S. EPA a report that specifically identifies and explains its objections, describes the acceptable uses of the data, if any, and identifies any limitations to the use of the data. The report must be submitted to U.S.

EPA within 30 days after receipt of the report containing the data, or on a schedule otherwise approved by the U.S. EPA RPM/OSC.

21. Post-Removal Site Control. In accordance with the Work Plan schedule, or as otherwise directed by U.S. EPA, Respondent shall submit a Post-Removal Site Control Plan which shall include provisions for periodic monitoring of the Site and maintenance (operation and maintenance), as necessary. In areas where U.S. EPA determines that institutional controls are needed, the plan shall also include an Institutional Control Implementation and Assurance Plan ("ICIAP"). As necessary, the ICIAP, shall incorporate proprietary controls (easements or covenants running with the land) and state or local laws, regulations, ordinances, zoning restrictions, or other governmental controls or notices that: (a) limit land, water, and/or resource use to minimize the potential for human exposure to contamination at or in connection with the Site; (b) limit land, water, and/or resource use to implement, ensure non-interference with, or ensure the protectiveness of the response action; and/or (c) provide information intended to modify or guide human behavior at or in connection with the Site. The plan shall also include maintenance, monitoring, and enforcement of institutional controls, a reporting method and schedule, a method to ensure the continued efficacy of the institutional controls and a contingency plan in the event institutional controls are ineffective as provided in the ICIAP. Upon U.S. EPA approval, Respondent shall either conduct Post-Removal Site Control activities, or obtain a written commitment from another party for conduct of such activities, until such time as U.S. EPA determines that no further Post-Removal Site Control is necessary. Respondent shall provide U.S. EPA and the State with documentation of all Post-Removal Site Control commitments.

22. Progress Reports. Respondent shall submit a written progress report to U.S. EPA concerning actions undertaken pursuant to this Settlement Agreement every 30th day after the date of receipt of U.S. EPA's approval of the Work Plan until issuance of Notice of Completion of Work pursuant to Section XXV, unless otherwise directed in writing by the RPM/OSC. These reports shall describe all significant developments during the preceding period, including the actions performed and any problems encountered, analytical data received during the reporting period, and the developments anticipated during the next reporting period, including a schedule of actions to be performed, anticipated problems, and planned resolutions of past or anticipated problems.

23. Final Report. Within 90 calendar days after completion of all Work required by this Settlement Agreement, other than continuing obligations listed in Section XXV (Notice of Completion), Respondent shall submit for U.S. EPA review a final report summarizing the actions taken to comply with this Settlement Agreement. The final report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP entitled "OSC Reports" and with the guidance set forth in "Superfund Removal Procedures: Removal Response Reporting – POLREPS and OSC Reports" (OSWER Directive No. 9360.3-03, June 1, 1994). The final report shall include: 1) a good faith estimate of total costs or a statement of actual costs incurred in complying with this Settlement Agreement; 2) a listing of quantities and types of materials removed off-Site

or handled on-Site; 3) a discussion of removal and disposal options considered for those materials and a listing of the ultimate destination(s) of those materials; 4) a presentation of the final validated analytical results of all sampling and analyses performed; 5) and accompanying appendices containing all relevant documentation generated during the removal action (e.g., manifests, contracts, and permits). The final report shall also include the following certification signed by a responsible corporate official of Respondent or Respondent's Project Coordinator:

> "Under penalty of law, I certify that to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of the report, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

24. Off-Site Shipments.

a. Respondent may ship hazardous substances, pollutants and contaminants from the Site to an off-Site facility only if it complies with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondent will be deemed to be in compliance with CERCLA Section 121(d)(3) and 40 C.F.R. § 300.440 regarding a shipment if Respondent obtains a prior determination from U.S. EPA that the proposed receiving facility for such shipment is acceptable under the criteria of 40 C.F.R. § 300.440(b).

b. Respondent may ship Waste Material from the Site to an out-of-state waste management facility only if, prior to any shipment, it provides written notice to the appropriate state environmental official in the receiving facility's state and to the RPM/OSC. This written notice requirement shall not apply to any off-Site shipments when the total quantity of all such shipments will not exceed ten cubic yards. The written notice must include the following information, if available: (1) the name and location of the receiving facility; (2) the type and quantity of Waste Material to be shipped; (3) the schedule for the shipment; and (4) the method of transportation. Respondent also shall notify the state environmental official referenced above and the RPM/OSC of any major changes in the shipment plan, such as a decision to ship the Waste Material to a different out-of-state facility. Respondent shall provide the written notice after the award of the contract for the removal action and before the Waste Material is shipped.

c. Respondent may ship Investigation Derived Waste ("IDW") from the Site to an off-Site facility only if it complies with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), 40 C.F.R. § 300.440, U.S. EPA's "Guide to Management of Investigation Derived Waste," OSWER 9345.3-03FS (Jan. 1992), and any IDW-specific requirements contained in the Action Memorandum. Wastes shipped off-Site to a laboratory for characterization, and RCRA hazardous wastes that meet the

requirements for an exemption from RCRA under 40 C.F.R. § 261.4(e) shipped off-Site for treatability studies, are not subject to 40 C.F.R. § 300.440.

IX. PROPERTY REQUIREMENTS

25. If the Site, or any other property where access is needed to implement this Settlement Agreement, is owned or controlled by the Respondent, then Respondent shall, commencing on the Effective Date, provide U.S. EPA, the State, and their representatives, including contractors, with access at all reasonable times to the Site, or such other property, for the purpose of conducting any activity related to this Settlement Agreement. If such access is provided, Respondent may require U.S. EPA, the State, and their representatives to abide by all visitation rules contained in the approved Work Plan.

26. Where any action under this Settlement Agreement is to be performed in areas owned by or in possession of someone other than Respondent, Respondent shall use its best efforts to obtain all necessary access agreements per the schedule to be approved as part of the Work Plan, or as otherwise specified in writing by the RPM/OSC. The access agreement(s) shall provide Respondent, U.S. EPA, and their authorized representatives, access to the property to conduct the activities required under this Settlement Agreement. Respondent shall immediately notify U.S. EPA if after using its best efforts it is unable to obtain such agreements. If best efforts are not successful, Respondent shall describe in writing its efforts to obtain access. U.S. EPA may then assist Respondent in gaining access, to the extent necessary to effectuate the response actions described herein, using such means as U.S. EPA deems appropriate. Respondent shall reimburse U.S. EPA for all costs and attorney's fees incurred by the United States in obtaining such access, in accordance with the procedures in Section XV (Payment of Response Costs).

27. If Respondent acquires Affected Property, it shall not subsequently Transfer its Affected Property unless it has first secured U.S. EPA's approval of, and transferee's consent to, an agreement that: (i) is enforceable by Respondent and U.S. EPA; and (ii) requires the transferee to provide access to and refrain from using the Affected Property to the same extent as is provided under the ICIAP.

28. In the event of any Transfer of Affected Property, unless U.S. EPA otherwise consents in writing, Respondent shall continue to comply with its obligations under the Settlement Agreement, including their obligation to secure access and ensure compliance with any land, water, or other resource use restrictions regarding the Affected Property.

29. Notwithstanding any provision of this Settlement Agreement, U.S. EPA and the State retain all of their access authorities and rights, as well as all of their rights to require land, water, or other resource restrictions, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

X. ACCESS TO INFORMATION

30. Respondent shall provide to U.S. EPA or its authorized representative, upon request, copies of all records, reports, documents and other information (including records, reports, documents, and other information in electronic form) (hereinafter referred to as "Records") within its possession or control or that of its contractors or agents relating to activities at the Site or to the implementation of this Settlement Agreement, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Respondent shall also make available to U.S. EPA or its authorized representative, for purposes of investigation, information gathering, or testimony, its employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

31. Business Confidential Claims. Respondent may assert business confidentiality claims covering part or all of a Record submitted to U.S. EPA under this Settlement Agreement to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Respondent shall segregate and clearly identify all Records or parts thereof submitted under this Settlement Agreement for which Respondent asserts business confidentiality claims. Records determined to be confidential by U.S. EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies Records when they are submitted to U.S. EPA, or if U.S. EPA has notified Respondent that the documents or information are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such Records without further notice to Respondent.

32. Privileged and Protected Claims.

    a. Respondent may assert that all or part of a Record requested by U.S. EPA is privileged or protected as provided under federal law, in lieu of providing the Record, provided Respondent complies with Paragraph 32.b, and except as provided in Paragraph 32.c.

    b. If Respondent asserts such a privilege or protection it shall provide U.S. EPA with the following information regarding such Record: its title; its date; the name, title affiliation (e.g., company or firm), and address of the author, of each addressee, and of each recipient; a description of the Record's contents; and the privilege asserted by Respondent. If a claim of privilege or protection applies only to a portion of a Record, Respondent shall provide the Record to U.S. EPA in redacted form to mask the privileged or protected portion only. Respondent shall retain all Records that they claim to be privileged or protected until U.S. EPA has had a reasonable opportunity to dispute the privilege or protection claim and any such dispute has been resolved in Respondent's favor.

c. Respondent may make no claim of privilege or protection regarding: (1) any data regarding the Site, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or the portion of any other Record that evidences conditions at or around the Site; or (2) the portion of any Record that Respondent is required to create or generate pursuant to this Settlement Agreement.

33. Notwithstanding any provision of this Settlement Agreement, U.S. EPA and the State retain all of their information gathering authorities and rights, including enforcement authorities related thereto, under CERCLA, RCRA and any other applicable statutes or regulations.

XI. RECORD RETENTION

34. Respondent shall preserve and retain all non-identical copies of Records (including Records in electronic form) now in its possession or control, or that come into its possession or control that relate in any manner to the performance of the Work or the liability of any person under CERCLA with respect to the Site, regardless of any corporate retention policy to the contrary, consistent with the terms, conditions, and requirements of Section XV (Retention of Records) of the 2010 AOC. Respondent shall also instruct its contractors and agents to preserve all Records of whatever kind, nature or description relating to performance of the Work, consistent with the terms, conditions, and requirements of Section XV (Retention of Records) of the 2010 AOC. Respondent (and its contractors and agents) must retain, in addition, copies of all data generated during the performance of the Work and not contained in the aforementioned Records required to be retained.

35. At the conclusion of this document retention period, Respondent shall notify U.S. EPA at least 90 days prior to the destruction of any such records or documents, and, upon request by U.S. EPA, and except as provided in Paragraph 32 (Privileged and Protected Claims), Respondent shall deliver any such records or documents to U.S. EPA.

36. Respondent hereby certifies that to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed or otherwise disposed of any Records (other than identical copies) relating to its potential liability regarding the Site since notification of potential liability by U.S. EPA or the State or the filing of suit against it regarding the Site and that it has fully complied and will fully comply with any and all U.S. EPA and State requests for information pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927, and state law.

XII. COMPLIANCE WITH OTHER LAWS

37. Nothing in this Settlement Agreement limits Respondent's obligations to comply with the requirements of all applicable local, state, and federal laws and regulations, except as provided in Section 121(e) of CERCLA, 42 U.S.C. § 6921(e), and 40 C.F.R. §§ 300.400(e) and 300.415(j). In accordance with 40 C.F.R. § 300.415(j), all on-Site actions required pursuant to this Settlement Agreement shall, to the extent practicable, as determined by U.S. EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements ("ARARs") under federal environmental or state environmental or facility siting laws. In the Work Plan required under Paragraph 17 or in the design documents to be submitted pursuant to the Work Plan, the Respondent shall identify ARARs, and propose methods and means to attain the ARARs to the extent practicable, as determined by U.S. EPA, considering the exigencies of the situation.

38. No local, state, or federal permit shall be required for any portion of the Work conducted entirely on-Site (i.e., within the areal extent of contamination or in very close proximity to the contamination and necessary for implementation of the Work), including studies, if the action is selected and carried out in compliance with Section 121 of CERCLA, 42 U.S.C. § 9621. Where any portion of the Work that is not on-Site requires a federal or state permit or approval, Respondent shall submit timely and complete applications and take all other actions necessary to obtain and to comply with all such permits or approvals. Respondent may seek relief under the provisions of Section XVII (Force Majeure) for any delay in the performance of the Work resulting from a failure to obtain, or a delay in obtaining, any permit or approval required for the Work, provided that they have submitted timely and complete applications and taken all other actions necessary to obtain all such permits or approvals. This Settlement Agreement is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

XIII. EMERGENCY RESPONSE AND NOTIFICATION OF RELEASES

39. Emergency Response. In the event of any action or occurrence during performance of the Work which causes or threatens a release of Waste Material on, at, or from the Site that either constitutes an emergency situation or that may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action to prevent, abate, or minimize such release or threat of release. Respondent shall take these actions in accordance with all applicable provisions of this Settlement Agreement, including, but not limited to, the Health and Safety Plan. Respondent shall also immediately notify the RPM/OSC or, in the event of his/her unavailability, the Regional Duty Officer, Emergency Response Branch, Region 5 at (312) 353-2318, of the incident or Site conditions. The Respondent shall also immediately notify the Pollution Emergency Alerting System (PEAS) at (800) 292-4706 (within Michigan) or at (517) 373-7660 (outside of Michigan). In its notifications, Respondent shall (1) provide to U.S. EPA the name or other contact information for the State notification recipient; (2) provide to the State the name or other contact information

for the U.S. EPA notification recipient; and (3) inform both the U.S. EPA contact and the State contact of the response actions being taken by the Respondent. In the event that Respondent fails to take appropriate response action as required by this Paragraph, and U.S. EPA takes such action instead, Respondent shall reimburse U.S. EPA all costs of the response action not inconsistent with the NCP pursuant to Section XV (Payment of Response Costs). Notwithstanding any provision of this Settlement Agreement, U.S. EPA and the State retain all of their authorities and rights to compel emergency notification, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

40. Release Reporting. Upon the occurrence of any event during performance of the Work that Respondent is required to report pursuant to Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-to-know Act (EPCRA), 42 U.S.C. § 11004, Respondent shall immediately orally notify the RPM/OSC or, in the event of his/her unavailability, the Regional Duty Officer at (312) 353-2318 and the National Response Center at (800) 424-8802. The Respondent shall also immediately notify the Pollution Emergency Alerting System (PEAS) at (800) 292-4706 (within Michigan) or at (517) 373-7660 (outside of Michigan). In its notifications, Respondent shall (1) provide to U.S. EPA the name or other contact information for the State notification recipient; (2) provide to the State the name or other contact information for the U.S. EPA notification recipient; and (3) inform both the U.S. EPA contact and the State contact of the response actions being taken by the Respondent. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004, *et seq*. Notwithstanding any provision of this Settlement Agreement, U.S. EPA and the State retain all of their authorities and rights to compel emergency notification, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

41. For any event covered under this Section, Respondent shall submit a written report to U.S. EPA within 7 days after the onset of such event, setting forth the action or event that occurred and the measures taken, and to be taken, to mitigate any release or threat of release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release or threat of release.

XIV. PAYMENT OF RESPONSE COSTS

42. Payments for Future Response Costs. Respondent shall pay U.S. EPA all Future Response Costs not inconsistent with the NCP.

    a. Periodic Bills. On a periodic basis, U.S. EPA will send Respondent a bill requiring payment that consists of an Itemized Cost Summary which includes direct and indirect costs incurred by U.S. EPA, its contractors, subcontractors, and the United

States Department of Justice. Respondent shall make all payments within 60 calendar days of receipt of each bill requiring payment, except as otherwise provided in Paragraph 44 (Contesting Future Response Costs) according to the following procedures: Payment shall be made to U.S. EPA by Electronic Funds Transfer ("EFT") in accordance with current EFT procedures to be provided to Respondent by U.S. EPA Region 5. Payment shall be accompanied by a statement identifying the name and address of the party(ies) making payment, the Site name, U.S. EPA Region 5, and the Site/Spill ID Number B5KF.

b. Notice of Payment. At the time of payment, Respondent shall send notice that payment has been made to Mary Logan, RPM/OSC, at logan.mary@epa.gov or 77 West Jackson Blvd., SR-6J, Chicago, Illinois, 60604-3590, and to Jeffrey A. Cahn, Associate Regional Counsel, at cahn.jeffrey@epa.gov or 77 West Jackson Boulevard, C-14J, Chicago, Illinois, 60604-3590, and to Catherine Garypie, Associate Regional Counsel, at garypie.catherine@epa.gov or 77 West Jackson Boulevard, C-14J, Chicago, Illinois, 60604-3590 and to the U.S. EPA Cincinnati Finance Office by email at cinwd_acctsreceivable@epa.gov, or by mail at 26 W. Martin Luther King Drive, Cincinnati Ohio 45268. Such notice shall reference the U.S. EPA Site/Spill ID Number B5KF, the U.S. EPA docket number for this action.

c. Deposit of Future Response Costs Payments. The total amount paid by Respondent pursuant to Paragraph 42(a) (Periodic Bills) shall be deposited by U.S. EPA in the TRSR&B Site Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by U.S. EPA to the EPA Hazardous Substance Superfund provided, however, that U.S. EPA may deposit a Future Response Costs payment directly into the EPA Hazardous Substance Superfund if, at the time the payment is received, U.S. EPA estimates that the TRSR&B Site Special Account balance is sufficient to address currently anticipated future response actions to be conducted or financed by U.S. EPA at or in connection with the Site. Any decision by U.S. EPA to deposit a Future Response Costs payment directly into the EPA Hazardous Substance Superfund for this reason shall not be subject to challenge by Respondent pursuant to the dispute resolution provisions of this Settlement Agreement or in any other forum.

43. Interest. In the event that the payments for Future Response Costs are not made within 60 days of Respondent's receipt of a bill, Respondent shall pay Interest on the unpaid balance. The Interest on Future Response Costs shall begin to accrue on the date of the bill and shall continue to accrue until the date of Respondent's payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondent's failure to make timely payments under this Section, including but not limited to, payment of stipulated penalties pursuant to Section XVII.

44. Contesting Future Response Costs. Respondent may initiate the procedures of Section XV (Dispute Resolution) regarding payment of any Future Response Costs billed under Paragraph 42 (Payments for Future Response Costs) if it determines that U.S. EPA has made a mathematical error or included a cost item that is not within the definition of Future Response Costs, or if it believes U.S. EPA incurred excess costs as a direct result of a U.S. EPA action that was inconsistent with a specific provision or provisions of the NCP. To initiate such dispute, Respondent shall submit a Notice of Dispute in writing to the RPM/OSC within 60 days after receipt of the bill. Any such Notice of Dispute shall specifically identify the contested Future Response Costs and the basis for objection. If Respondent submits a Notice of Dispute, Respondent shall within the 60-day period, also as a requirement for initiating the dispute, (a) pay all uncontested Future Response Costs to U.S. EPA in the manner described in Paragraph 42, and (b) establish, in a duly chartered bank or trust company, an interest-bearing escrow account that is insured by the Federal Deposit Insurance Corporation ("FDIC") and remit to that escrow account funds equivalent to the amount of the contested Future Response Costs. Respondent shall send to the RPM/OSC a copy of the transmittal letter and check paying the uncontested Future Response Costs, and a copy of the correspondence that establishes and funds the escrow account, including, but not limited to, information containing the identity of the bank and bank account under which the escrow account is established as well as a bank statement showing the initial balance of the escrow account. If U.S. EPA prevails in the dispute, within 5 days after the resolution of the dispute, Respondent shall pay the sums due (with accrued interest) to U.S. EPA in the manner described in Paragraph 42. If Respondent prevails concerning any aspect of the contested costs, Respondent shall pay that portion of the costs (plus associated accrued interest) for which they did not prevail to U.S. EPA in the manner described in Paragraph 42. Respondent shall be disbursed any balance of the escrow account. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XV (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding Respondent's obligation to reimburse U.S. EPA for its Future Response Costs.

XV. DISPUTE RESOLUTION

45. Unless otherwise expressly provided for in this Settlement Agreement, the dispute resolution procedures of this Section shall be the exclusive mechanism for resolving disputes arising under this Settlement Agreement. The Parties shall attempt to resolve any disagreements concerning this Settlement Agreement expeditiously and informally.

46. Informal Dispute Resolution. If Respondent objects to any U.S. EPA action taken pursuant to this Settlement Agreement, including billings for Future Response Costs, it shall send U.S. EPA a written Notice of Dispute describing its objection(s) within 10 calendar days of such action. U.S. EPA and Respondent shall have 21 calendar days from U.S. EPA's receipt of Respondent's Notice of Dispute to resolve the dispute through informal negotiations (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of U.S. EPA. Any agreement reached by the Parties

pursuant to this Section shall be in writing and shall, upon signature by the Parties, be incorporated into and become an enforceable part of this Settlement Agreement.

47. Formal Dispute Resolution. If the Parties are unable to reach an agreement within the Negotiation Period, Respondent shall, within 20 days after the end of the Negotiation Period, submit a statement of position to the RPM/OSC. U.S. EPA may, within 20 days thereafter, submit a statement of position. Thereafter, the Director of the Superfund & Emergency Management Division, U.S. EPA Region 5 will issue a written decision on the dispute to Respondent. U.S. EPA's decision shall be incorporated into and become an enforceable part of this Settlement Agreement. Respondent shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with U.S. EPA's decision, whichever occurs.

48. Except as provided in Paragraph 44 (Contesting Future Response Costs) or as agreed by U.S. EPA, the invocation of formal dispute resolution procedures under this Section does not extend, postpone, or affect in any way any obligation of Respondent under this Settlement Agreement. Except as provided in Paragraph 57, stipulated penalties with respect to the disputed matter shall continue to accrue, but payment shall be stayed pending resolution of the dispute. Notwithstanding the stay of payment, stipulated penalties shall accrue from the first day of noncompliance with any applicable provision of this Settlement Agreement. In the event that Respondent does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section XVII (Stipulated Penalties).

XVI. FORCE MAJEURE

49. Respondent agrees to perform all requirements of this Settlement Agreement within the time limits established under this Settlement Agreement, unless the performance is delayed by a *force majeure*. For purposes of this Settlement Agreement, a *force majeure* is defined as any event arising from causes beyond the control of Respondent, or of any entity controlled by Respondent, including but not limited to its contractors and subcontractors, which delays or prevents the performance of any obligation under this Settlement Agreement despite Respondent's best efforts to fulfill the obligation. The requirement that Respondent exercises "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential *force majeure* and best efforts to address the effects of any potential *force majeure* (a) as it is occurring and (b) following the potential *force majeure* such that the delay and any adverse effects of the delay are minimized to the greatest extent possible. *Force majeure* does not include financial inability to complete the Work or increased cost of performance.

50. If any event occurs or has occurred that may delay the performance of any obligation under this Settlement Agreement for which Respondent intends or may intend to assert a claim of *force majeure*, Respondent shall notify U.S. EPA orally within 24 hours of when Respondent first knew that the event might cause a delay. Within 7 calendar days

thereafter, Respondent shall provide to U.S. EPA in writing an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondent's rationale for attributing such delay to a *force majeure*; and a statement as to whether, in the opinion of Respondent, such event may cause or contribute to an endangerment to public health, welfare or the environment. Respondent shall include with any notice all available documentation supporting its claim that the delay was attributable to a *force majeure*. Respondent shall be deemed to know of any circumstance of which Respondent, any entity controlled by Respondent, or Respondent's contractors knew or should have known. Failure to comply with the above requirements regarding an event shall preclude Respondent from asserting any claim of *force majeure* regarding that event, provided, however, that if U.S. EPA, despite the late or incomplete notice, is able to assess to its satisfaction whether the event is a *force majeure* under Paragraph 49 and whether Respondent has exercised its best efforts under Paragraph 49, U.S. EPA may, in its unreviewable discretion, excuse in writing Respondent's failure to submit timely or complete notices under this Paragraph.

51. If U.S. EPA agrees that the delay or anticipated delay is attributable to a *force majeure*, the time for performance of the obligations under this Settlement Agreement that are affected by the *force majeure* will be extended by U.S. EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the *force majeure* shall not, of itself, extend the time for performance of any other obligation. If U.S. EPA does not agree that the delay or anticipated delay has been or will be caused by a *force majeure*, U.S. EPA will notify Respondent in writing of its decision. If U.S. EPA agrees that the delay is attributable to a *force majeure*, U.S. EPA will notify Respondent in writing of the length of the extension, if any, for performance of the obligations affected by the *force majeure*.

52. If Respondent elects to invoke the dispute resolution procedures set forth in Section XV (Dispute Resolution), it shall do so no later than 15 days after receipt of U.S. EPA's notice. In any such proceeding, Respondent shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a *force majeure*, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Respondent complied with the requirements of Paragraphs 49 and 50. If Respondent carries this burden, the delay at issue shall be deemed not to be a violation by Respondent of the affected obligation of this Settlement Agreement identified to U.S. EPA.

53. The failure by U.S. EPA to timely complete any obligation under the Settlement Agreement is not a violation of the Settlement Agreement, provided, however, that if such failure prevents Respondent from meeting one or more deadlines under the Settlement Agreement, Respondent may seek relief under this Section.

XVII. STIPULATED PENALTIES

54. Respondent shall be liable to U.S. EPA for stipulated penalties in the amounts set forth in Paragraphs 55 and 56 for failure to comply with the requirements of this Settlement Agreement specified below, unless excused under Section XVI (*Force Majeure*) or as otherwise approved by U.S. EPA. "Compliance" by Respondent shall include completion of all activities and obligations, including payments, required under this Settlement Agreement, or any deliverable approved under this Settlement Agreement, in accordance with all applicable requirements of law, this Settlement Agreement and any deliverables approved under this Settlement Agreement and within the specified time schedules established by and approved under this Settlement Agreement.

55. Stipulated Penalty Amounts – Work (Including Payments and Excluding Deliverables).

    a. The following stipulated penalties shall accrue per violation per day for any noncompliance identified in Paragraph 55(b):

Penalty Per Violation Per Day	Period of Noncompliance
$500	1st through 14th day
$1000	15th through 30th day
$2,500	31st day and beyond

    b. Compliance Milestones

        i. Respondent shall submit each of the plans required by this Settlement Agreement, including the Removal Work Plan in accordance with the schedules established in this Settlement Agreement.

        ii. Respondent shall complete each of the tasks required by the plans, including the Removal Work Plan in accordance with the schedules established in the plans.

        iii. Respondent shall implement the Work as prescribed in this Settlement Agreement, and the plans, including the Removal Work Plan.

        iv. Respondent shall pay Future Response Costs as provided in this Settlement Agreement.

        v. Respondent shall establish and maintain financial assurance in compliance with the timelines and other substantive and procedural requirements of Section XXVI (Financial Assurance).

56. Stipulated Penalty Amounts – Deliverables. The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate deliverables pursuant to this Settlement Agreement:

Penalty Per Violation Per Day	Period of Noncompliance
$500	1st through 14th day
$1000	15th through 30th day
$2,500	31st day and beyond

57. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. Penalties shall continue to accrue during any dispute resolution period and shall be paid within 20 days after the agreement or the receipt of U.S. EPA's decision or order. However, stipulated penalties shall not accrue: 1) with respect to a deficient submission under Section VIII (Work to be Performed), during the period, if any, beginning on the 31st day after U.S. EPA's receipt of such submission until the date that U.S. EPA notifies Respondent of any deficiency; and 2) with respect to a decision by the Director of the Superfund & Emergency Management Division, Region 5, under Paragraph 47 of Section XV (Formal Dispute Resolution), during the period, if any, beginning on the 21st day after U.S. EPA submits its written statement of position until the date that the Director of the Superfund & Emergency Management Division issues a final decision regarding such dispute. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement Agreement. U.S. EPA shall consider Respondent's good faith and best efforts in seeking to meet the terms and conditions of this Settlement Agreement and associated Work Plans and schedules.

58. Following U.S. EPA's determination that Respondent has failed to comply with a requirement of this Settlement Agreement, U.S. EPA may give Respondent written notification of the failure and describe the noncompliance. U.S. EPA may send Respondent a written demand for payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of whether U.S. EPA has notified Respondent of a violation.

59. All penalties accruing under this Section shall be due and payable to U.S. EPA within 30 days of Respondent's receipt from U.S. EPA of a demand for payment of the penalties, unless Respondent invokes the dispute resolution procedures under Section XV (Dispute Resolution). All payments to U.S. EPA under this Section shall indicate that the payment is for stipulated penalties and shall be made in accordance with Paragraph 42 (Payments for Future Response Costs).

60. The payment of penalties and Interest, if any, shall not alter in any way Respondent's obligation to complete performance of the Work required under this Settlement Agreement.

61. If Respondent fails to pay stipulated penalties when due, Respondent shall pay Interest on the unpaid stipulated penalties as follows: (a) if Respondent has timely invoked dispute resolution such that the obligation to pay stipulated penalties has been stayed pending the outcome of dispute resolution, Interest shall accrue from the date stipulated penalties are

due pursuant to Paragraph 57 until the date of payment; and (b) if Respondent fails to timely invoke dispute resolution, Interest shall accrue from the date of demand under Paragraph 59 until the date of payment. If Respondent fails to pay stipulated penalties and Interest when due, the United States may institute proceedings to collect the penalties and Interest.

62. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or in any way limiting the ability of U.S. EPA to seek any other remedies or sanctions available by virtue of Respondent's violation of this Settlement Agreement or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Sections 106(b) and 122(*l*) of CERCLA, 42 U.S.C. §§ 9606(b) and 9622(*l*), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Provided, however, that U.S. EPA shall not seek civil penalties pursuant to Section 106(b) or 122(*l*) of CERCLA or punitive damages pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is provided herein, except in the case of a willful violation of this Settlement Agreement. Should Respondent violate this Settlement Agreement or any portion hereof, U.S. EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. §9604, and/or may seek judicial enforcement of this Settlement Agreement pursuant to Section 106 of CERCLA, 42 U.S.C. §9606.

63. Notwithstanding any other provision of this Section, U.S. EPA may, in its unreviewable discretion, waive in writing any portion of stipulated penalties or interest that have accrued pursuant to this Settlement Agreement.

XVIII. COVENANT NOT TO SUE BY U.S. EPA

64. In consideration of the actions that will be performed and the payments that will be made by Respondent under the terms of this Settlement Agreement, and except as otherwise specifically provided in this Settlement Agreement, U.S. EPA covenants not to sue or to take administrative action against Respondent pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), for the Work and Future Response Costs. This covenant not to sue shall take effect upon the Effective Date and is conditioned upon the complete and satisfactory performance by Respondent of all obligations under this Settlement Agreement, including, but not limited to, payment of Future Response Costs pursuant to Section XV. This covenant not to sue extends only to Respondent and does not extend to any other person.

XIX. RESERVATIONS OF RIGHTS BY U.S. EPA

65. Except as specifically provided in this Settlement Agreement, nothing herein shall limit the power and authority of U.S. EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent,

abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site (including carrying out the required actions unilaterally pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, if Respondent violates this Settlement Agreement or any portion thereof). Further, nothing herein shall prevent U.S. EPA from seeking legal or equitable relief to enforce the terms of this Settlement Agreement, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring the Respondent in the future to perform additional activities pursuant to CERCLA or any other applicable law.

66. The covenant set forth in Section XVIII (Covenant Not To Sue By U.S. EPA) above does not pertain to any matters other than those expressly identified therein. U.S. EPA reserves, and this Settlement Agreement is without prejudice to, all rights against Respondent with respect to all other matters, including, but not limited to:

    a. liability for failure by Respondent to meet a requirement of this Settlement Agreement;

    b. liability for costs not included within the definition of Future Response Costs;

    c. liability for performance of response action other than the Work;

    d. criminal liability;

    e. liability for violations of federal or state law that occur during or after implementation of the Work;

    f. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;

    g. liability arising from the past, present, or future disposal, release or threat of release of Waste Materials outside of the Site; and

    h. liability for costs incurred or to be incurred by the Agency for Toxic Substances and Disease Registry related to the Site not paid as Future Response Costs under this Settlement Agreement.

XX. COVENANT NOT TO SUE BY RESPONDENT

67. Covenant Not to Sue the United States by Respondent. Except as specifically provided in this Settlement Agreement, Respondent covenants not to sue and agrees not to assert any claims or causes of action against the United States, or its contractors or employees, with respect to the Work, Future Response Costs, or this Settlement Agreement, including but not limited to:

a. any direct or indirect claim for reimbursement from the Hazardous Substance Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;

b. any claim arising out of the Work or arising out of response actions at or in connection with the Site, including any claim under the United States Constitution, the Michigan Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, as amended, or at common law; or

c. any claim against the United States pursuant to CERCLA, 42 U.S.C. § 9601, *et seq.*, relating to the Work or Future Response Costs.

The covenant not to sue in this Paragraph 67 does not include, and Dow specifically reserves, its right to assert claims pursuant to CERCLA, 42 U.S.C. § 9601, *et seq.*, relating to the Work or Future Response Costs against the Department of Defense, the Department of Commerce, and/or the General Services Administration, and their components, and the predecessors, successors and assigns of the foregoing, provided that the Department of Defense, the Department of Commerce, and/or the General Services Administration, and their components, and the predecessors, successors and assigns of the foregoing, have not each resolved their liability at the Site with U.S. EPA as of the time Respondent asserts such claims.

68. These covenants not to sue shall not apply in the event the United States brings a cause of action or issues an order pursuant to the reservations set forth in Paragraphs 66(b), (c), and (e)-(g), but only to the extent that Respondent's claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

69. Nothing in this Agreement shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

70. Respondent agrees not to seek judicial review of a decision to list the Site on the NPL at any time after the Effective Date of this Settlement Agreement based on a claim that changed site conditions that resulted from the performance of the Work in any way affected the basis for listing the Site.

XXI. OTHER CLAIMS

71. By issuance of this Settlement Agreement, the United States and U.S. EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent. The United States or U.S. EPA shall not be deemed a party to any contract entered into by Respondent or its directors, officers, employees, agents,

successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Settlement Agreement.

72. Except as expressly provided in Section XVIII (Covenant Not to Sue by U.S. EPA), nothing in this Settlement Agreement constitutes a satisfaction of or release from any claim or cause of action against Respondent or any person not a party to this Settlement Agreement, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States for costs, damages and interest under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

73. No action or decision by U.S. EPA pursuant to this Settlement Agreement shall give rise to any right to judicial review, except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XXII. CONTRIBUTION

74. The Parties agree that this Settlement Agreement constitutes an administrative settlement pursuant to which the Respondent has, as of the Effective Date, resolved liability to the United States within the meaning of Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), and is entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), or as may be otherwise provided by law, for "matters addressed" in this Settlement Agreement. The "matters addressed" in this Settlement Agreement are the Work and Future Response Costs.

75. The Parties further agree that this Settlement Agreement constitutes an administrative settlement pursuant to which the Respondent has, as of the Effective Date, resolved its liability to the United States within the meaning of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B).

76. Nothing in this Settlement Agreement precludes the United States or Respondent from asserting any claims, causes of action, or demands for indemnification, contribution, or cost recovery against any persons not Parties to this Settlement Agreement. Nothing herein diminishes the right of the United States, pursuant to Section 113(f)(2) and (3), 42 U.S.C. § 9613(f)(2) and (3), to pursue any such persons to obtain additional response costs or response action, and to enter into settlements that give rise to contribution protection pursuant to Section 113(f)(2) of CERCLA, 42 U.S.C. § 9613(f)(2).

77. Respondent shall, with respect to any suit or claim brought by it for matters related to this Settlement Agreement, notify EPA in writing no later than 60 days prior to the initiation of such suit or claim. Respondent also shall, with respect to any suit or claim brought against it for matters related to this Settlement Agreement, notify EPA in writing within 10 days after service of the complaint or claim upon it. In addition, Respondent shall

notify EPA within 10 days after service or receipt of any Motion for Summary Judgment and within 10 days after receipt of any order from a court setting a case for trial, for matters related to this Settlement Agreement.

XXIII. INDEMNIFICATION

78. The United States does not assume any liability by entering into this Settlement Agreement or by virtue of any designation of Respondent as U.S. EPA's authorized representatives under Section 104(e) of CERCLA, 42 U.S.C. § 9604(e), and 40 C.F.R. 300.400(d)(3). Respondent shall indemnify, save and hold harmless the United States, its officials, agents, contractors, subcontractors, employees and representatives for or from any and all claims or causes of action arising from, or on account of, negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, or subcontractors, and any persons acting on Respondent's behalf or under their control, in carrying out activities pursuant to this Settlement Agreement. In addition, Respondent agrees to pay the United States all costs it incurs, including but not limited to attorneys' fees and other expenses of litigation and settlement arising from, or on account of, claims made against the United States based on negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, subcontractors, and any persons acting on its behalf or under its control, in carrying out activities pursuant to this Settlement Agreement. The United States shall not be held out as a party to any contract entered into by or on behalf of Respondent in carrying out activities pursuant to this Settlement Agreement. Neither Respondent nor any such contractor shall be considered an agent of the United States. The Federal Tort Claims Act (28 U.S.C. §§ 2671, 2680) provides coverage for injury or loss of property, or injury or death caused by the negligent or wrongful act or omission of an employee of U.S. EPA while acting within the scope of his or her employment, under circumstances where U.S. EPA, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred.

79. The United States shall give Respondent notice of any claim for which the United States plans to seek indemnification pursuant to this Section and shall consult with Respondent prior to settling such claim.

80. Respondent covenants not to sue and agrees not to assert any claims or causes of action against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between Respondent and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays. In addition, Respondent shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between Respondent and any person for performance of Work on or relating to the Site, including, but not limited to, claims on account of construction delays.

XXIV. MODIFICATIONS

81. The RPM/OSC may modify any plan or schedule in writing or by oral direction. Any oral modification will be memorialized in writing by U.S. EPA promptly, but shall have as its effective date the date of the RPM/OSC's oral direction. Any other requirements of this Settlement Agreement may be modified in writing by mutual agreement of the parties.

82. If Respondent seeks permission to deviate from any approved work plan or schedule, Respondent's Project Coordinator shall submit a written request to U.S. EPA for approval outlining the proposed modification and its basis. Respondent may not proceed with the requested deviation until receiving oral or written approval from the RPM/OSC pursuant to Paragraph 81.

83. No informal advice, guidance, suggestion, or comment by the RPM/OSC or other U.S. EPA representatives regarding any deliverable submitted by Respondent shall relieve Respondent of its obligation to obtain any formal approval required by this Settlement Agreement, or to comply with all requirements of this Settlement Agreement, unless it is formally modified.

XXV. NOTICE OF COMPLETION OF WORK

84. When U.S. EPA determines, after U.S. EPA's review of the Final Report, that all Work has been fully performed in accordance with this Settlement Agreement, with the exception of any continuing obligations required by this Settlement Agreement, including, *e.g.*, Post-Removal Site Controls, land, water or other resource use restrictions, payment of Future Response Costs, or record retention, U.S. EPA will provide written notice to Respondent. If U.S. EPA determines that any such Work has not been completed in accordance with this Settlement Agreement, U.S. EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent modify the Work Plan if appropriate in order to correct such deficiencies. Respondent shall implement the modified and approved Work Plan and shall submit a modified Final Report in accordance with the U.S. EPA notice. Failure by Respondent to implement the approved modified Work Plan shall be a violation of this Settlement Agreement.

XXVI. FINANCIAL ASSURANCE

85. On, or before, May 31, 2019, or within 30 days of the effective date, whichever is later, Respondent shall establish and maintain financial security in the amount of $5,500,000 in one or more of the following forms:

a. A surety bond guaranteeing performance of the Work;

b. One or more irrevocable letters of credit equaling the total estimated cost of the Work;

c. A trust fund;

d. A guarantee to perform the Work by one or more parent corporations or subsidiaries, or by one or more unrelated corporations that have a substantial business relationship with at least one of Respondents; or

e. A demonstration that Respondent satisfies the requirements of 40 C.F.R. Part 264.143(f). For these purposes, references in 40 C.F.R. § 264.143(f) to the "sum of current closure and post-closure costs estimates and the current plugging and abandonment costs estimates" shall mean the amount of financial security specified above. If Respondent seeks to provide a demonstration under 40 C.F.R. § 264.143(f) and has provided a similar demonstration at other RCRA or CERCLA sites, the amount for which it is providing financial assurance at those other sites should generally be added to the estimated costs of the Work for this Paragraph.

86. If Respondent seeks to demonstrate the ability to complete the Work through a guarantee by a third party pursuant to Paragraph 85(d) of this Section, Respondent shall demonstrate that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143(f). If Respondent seeks to demonstrate its ability to complete the Work by means of the financial test or the corporate guarantee pursuant to Paragraph 85(d) or (e) of this Section, Respondent shall resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143(f) annually, within 90 days after the close of each such entity's fiscal year. If U.S. EPA determines at any time that the financial assurances provided pursuant to this Section are inadequate, Respondent shall, within 30 days of receipt of notice of U.S. EPA's determination, obtain and present to U.S. EPA for approval one of the other forms of financial assurance listed in Paragraph 85 of this Section. Respondent's inability to demonstrate financial ability to complete the Work shall not excuse performance of any activities required under this Settlement Agreement.

87. If, after the Effective Date, U.S. EPA determines at any time that the amount of financial security provided pursuant to this Section is inadequate, then Respondent shall, within 30 days of receipt of notice of U.S. EPA's determination, obtain and present to U.S. EPA for approval additional financial security in the amount designated by U.S. EPA and in one of the forms of financial assurance listed in Paragraph 85 of this Section. If, after the Effective Date, Respondent can show that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 85 of this Section, Respondent may, on any anniversary date of the Effective Date, or at any other time agreed to by the Parties, reduce the amount of the financial security provided under this Section to the estimated cost of the remaining Work to be performed. Respondent shall submit a proposal for such reduction to U.S. EPA, in accordance with the requirements of

this Section, and may reduce the amount of the security upon approval by U.S. EPA. In the event of a dispute, Respondent may reduce the amount of the security in accordance with the written decision resolving the dispute.

88. Respondent may change the form of financial assurance provided under this Section at any time, upon notice to and approval by U.S. EPA, provided that the new form of assurance meets the requirements of this Section. In the event of a dispute, Respondent may change the form of the financial assurance only in accordance with the written decision resolving the dispute.

89. Access to Financial Assurance

    a. If U.S. EPA carries out the required actions of this Settlement Agreement unilaterally pursuant to Section 104 of CERCLA, 42 U.S.C. §9604, then, in accordance with any applicable financial assurance mechanism, U.S. EPA is entitled to: (1) the performance of the Work; and/or (2) require that any funds guaranteed be paid in accordance with Paragraph 89.c. In this case, if either: (1) U.S. EPA is unable for any reason to promptly secure the resources guaranteed under any applicable financial assurance mechanism, whether in cash or in kind, to continue and complete the Work; or (2) the financial assurance is provided under Paragraph 85.d or 82.e then U.S. EPA may demand an amount, as determined by U.S. EPA, sufficient to cover the cost of the remaining Work to be performed. Respondent shall, within 45 days of such demand, pay the amount demanded as directed by U.S. EPA.

    b. If U.S. EPA is notified by the issuer of a financial assurance mechanism that it intends to cancel such mechanism, and the Respondent fails to provide an alternative financial assurance mechanism in accordance with this Section at least 30 days prior to the cancellation date, the funds guaranteed under such mechanism must be paid prior to cancellation in accordance with Paragraph 89.c.

    c. Any amounts required to be paid under this Paragraph 89 shall be, as directed by U.S. EPA: (i) paid to U.S. EPA in order to facilitate the completion of the Work by U.S. EPA or by another person; or (ii) deposited into an interest-bearing account, established at a duly chartered bank or trust company that is insured by the FDIC, in order to facilitate the completion of the Work by another person. If payment is made to U.S. EPA, U.S. EPA may deposit the payment into the EPA Hazardous Substance Superfund or into the TRSR&B Site Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by U.S. EPA to the EPA Hazardous Substance Superfund.

90. Release, Cancellation, or Discontinuation of Financial Assurance. Respondent may release, cancel, or discontinue any financial assurance provided under this Section only: (a) if U.S. EPA issues a Notice of Completion of Work under Section XXV (Notice of

Completion of Work); (b) in accordance with U.S. EPA's approval of such release, cancellation, or discontinuation; or (c) if there is a dispute regarding the release, cancellation, or discontinuance of any financial assurance, in accordance with the agreement or final decision resolving such dispute under Section XV (Dispute Resolution).

XXVII. INSURANCE

91. At least 7 days prior to commencing any on-Site work under this Settlement Agreement, Respondent shall secure, and shall maintain until the first anniversary after issuance of Notice of Completion of Work pursuant to Section XXV (Notice of Completion of Work), commercial general liability insurance with limits of one-million dollars ($1,000,000), for any one occurrence, and automobile insurance with limits of one-million dollars ($1,000,000), combined single limit, naming U.S. EPA as an additional insured with respect to all liability arising out of the activities performed by or on behalf of Respondent pursuant to this Settlement Agreement. Within the same time period, Respondent shall provide U.S. EPA with certificates of such insurance and a copy of each insurance policy. Respondent shall resubmit such certificates and copies of policies each year on the anniversary of the Effective Date. In addition, for the duration of the Settlement Agreement, Respondent shall satisfy, or shall ensure that its contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondent in furtherance of this Settlement Agreement. If Respondent demonstrates by evidence satisfactory to U.S. EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondent need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

XXVIII. SEVERABILITY/INTEGRATION/ATTACHMENTS

92. If a court issues an order that invalidates any provision of this Settlement Agreement or finds that Respondent has sufficient cause not to comply with one or more provisions of this Settlement Agreement, Respondent shall remain bound to comply with all provisions of this Settlement Agreement not invalidated or determined to be subject to a sufficient cause defense by the court's order.

93. This Settlement Agreement and its attachments constitute the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Settlement Agreement. The parties acknowledge that there are no representations, agreements or understandings relating to the settlement other than those expressly contained in this Settlement Agreement. The following attachments are incorporated into this Settlement Agreement:

Attachment A – Action Memorandum

Attachment B – Segments 6 & 7 Location

Attachment C – SMAs and BMAs

XXIX. EFFECTIVE DATE

94. This Settlement Agreement shall be effective upon receipt by Respondent of a copy of this Settlement Agreement signed by the Director of the Superfund & Emergency Management Division, U.S. EPA Region 5.

IN THE MATTER OF:

Segments 6 & 7 of the TRSR&B Site
The Dow Chemical Company
Midland, Michigan, 48667

The undersigned representative of Respondent certifies he/she is fully authorized to enter into the terms and conditions of this Settlement Agreement and to execute and legally bind the Respondent to this Settlement Agreement.

Agreed this 30 day of April, 2019.

For Respondent: The Dow Chemical Company

By: Mary J Draves

Mary Draves
Vice President and Chief Sustainability Officer
EH&S and Sustainability
The Dow Chemical Company

IN THE MATTER OF:

Segments 6 & 7 of the TRSR&B
Site The Dow Chemical Company
Midland, Michigan, 48667

It is so ORDERED and Agreed this 21st day of May, 2019.

5/21/2019

X

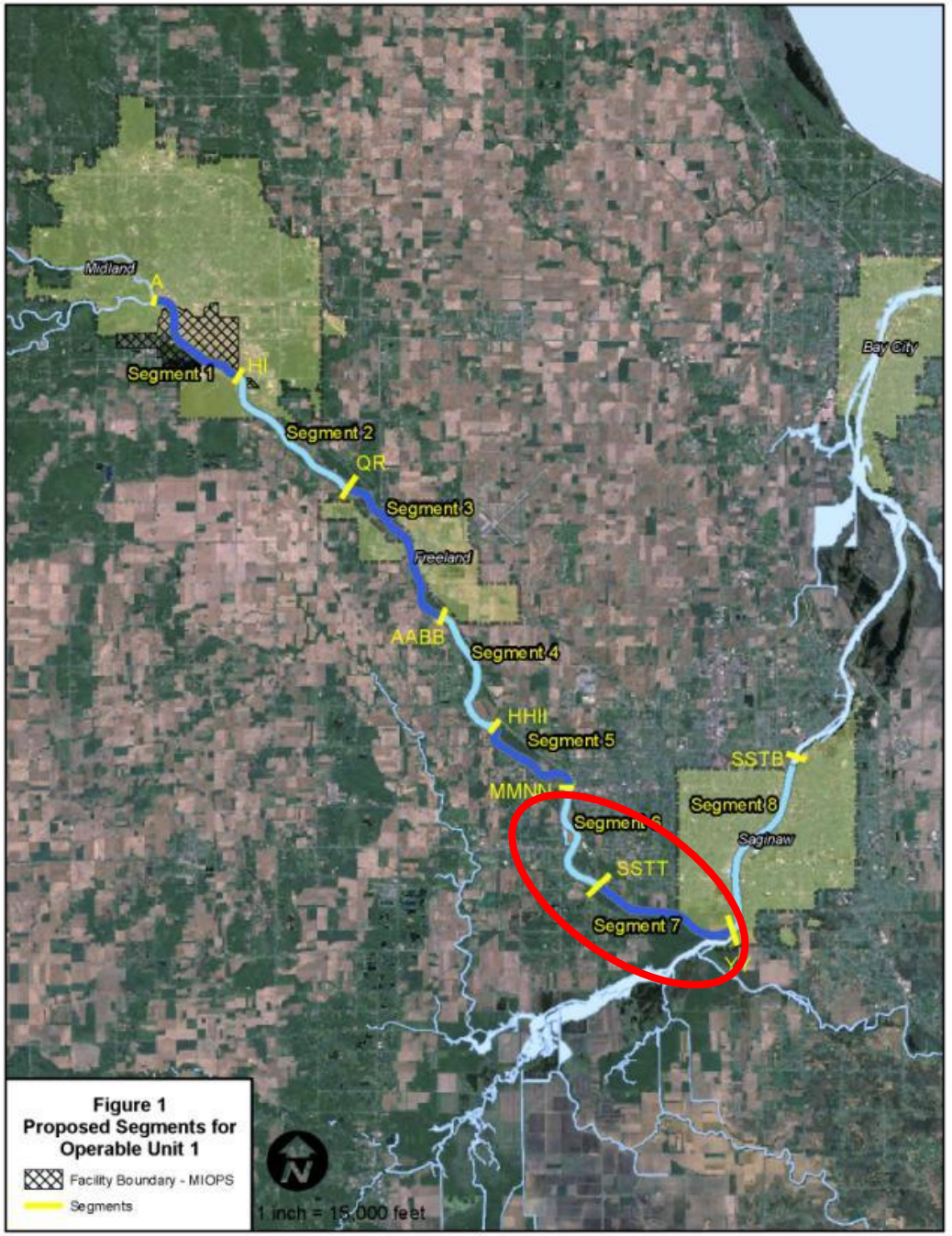
By: Douglas Ballotti
Director
Signed by: DOUGLAS BALLOTTI
Superfund & Emergency Management Division
United States Environmental Protection Agency
Region 5

ATTACHMENT A

Action Memorandum

ATTACHMENT B

Segments 6 & 7 Location



General Segments 6 & 7
Location Map

ATTACHMENT C

SMAs and BMAs as of January 2019

Feet
0 2,900 5,800

Segment 6 and 7
BMA and SMA Locations
Tittabawassee River

Figure 1

2/21/2019 |Segment_3_Logan_20150429_L

The SMAs and BMAs in Segments 6 & 7 of the Tittabawassee River where Work is required are depicted below and shown on the attached figures. Additional SMAs and/or BMAs in Segments 6 or 7 may be identified and may be added to the Site through an addendum to or amendment of the Segments 6 & 7 Action Memorandum by U.S. EPA and amendment of the Segments 6 & 7 Settlement Agreement by the Parties.

SMA	Location	Approximate Size (acres)
SMA 6-1	Reach OO, northeast	0.7
SMA 7-1	Reach XX, north	0.5
SMA 7-2	Reach YY, center of channel	1.1
SMA 7-3	Reach YY, center of channel	0.4

BMA	Location	Approximate Length (feet)
BMA 6-1	Reach NN, southwest	830
BMA 6-2	Reach PP, southwest	450
BMA 6-3	Reach PP, southwest	270
BMA 6-4	Reach RR, northeast	160
BMA 7-1	Reach UU, northeast	130
BMA 7-2	Reach VV, northeast	360
BMA 7-3	Reach WW Island	815